to treat, will be briefly set forth. There seems to exist in every case two important indications: to establish and promote secretion (elimination?), to strengthen and maintain the vital powers. Empirically, many old laymen now dead, or past their "threescore and ten," have in this mountain country, hemmed in and cut off from the balance of the world until recently (when railways were first built), where doctors were few and hard to get, learned to diagnose and to treat most cases of milk-sickness with an acumen which it pleases me to have this opportunity of recording, and of congratulating them upon. I have more than once "sat at the feet" of these Gamaliels, wise and sagacious though often unlettered as they were, and heard the recital of their experiences with the disease—experiences now forever ended, the disease being in most sections extinct, whilst in places where it is occasionally seen the Medical Practice Act and the plentifulness of doctors cause the latter to be sought. The treatment I first learned from these old men, and which I have found so very efficient in the cases it has been my fortune to meet with that I have seen no reason for substituting another, is to establish secretion by the free exhibition of mercurials, to be subsequently maintained with full doses of sulphate of magnesia, or preferably castor oil, and plenty of good whiskey or brandy—the latter, generally speaking, and more especially in severe cases, being preferable. With some minor variations in individual cases, the above treatment, simple and with a strong flavor of old-fashionedness about it, will fully meet the apparent necessities of cases of "milk-sickness" during the height of the disease. Later, during convalescence, tonics such as quinine, nux vomica, mineral acids, the hypophosphites, will prove of great value in restoring to healthy action the gastro-intestinal tract, which in many cases will demand more or less attention.

HÆMOLYMPH GLANDS.

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In the *Quarterly Journal of Microscopical Science*, 1883, N. S., vol. xxiv., will be found a paper of mine on some structures lying between the renal artery and vein in the human subject. These small bodies consisted of minute ganglia, lymphatic glands, a small body having the structure of the supra-renal capsule, and some glandular bodies which somewhat resembled compound lymphatic glands, with this difference, that instead of lymph circulating through them, there was a current of blood passing into what would be the lymph sinuses in a lymphatic gland, from vessels lying in the fibrous trabeculæ. I found these structures in three consecutive cases, and concluded that they were permanent. Other work intervened, and I did not at that time examine any more cases for these interesting structures.

In the *Lancet*, November 29, 1890, there appeared a paper by W. F. Robinson, a student of Edinburgh University, working under the direction of Dr. Russell, entitled "Prevertebral Hæmolymph Glands," giving a description of these glands in the sheep and bullock as well as in man, which accorded with that given by me in the paper alluded to above in every detail; and Dr. Russell was stated to have suggested the name hæmolymph glands, which I willingly accept, leaving out the prefix, which is superfluous. On seeing this paper, I wrote to Dr. Russell and sent him a reprint of my own; but as I received no answer from him I am unable to say whether he was aware of its existence.

The fact that my observations had been confirmed, and also the presence of these glands in the lower animals being determined, induced me to make further investigations into the subject, especially in various diseased conditions, to see if they were in any way affected.

I have removed all small structures lying in the connective tissue near the renal artery and vein in a number of cases, such as disease of the kidneys, chronic cystitis, stone in the bladder, general tuberculosis, and carcinoma. In all these cases I found these hæmolymph glands, generally more than one on each side. They varied greatly in size, but were similar in structure, and I found nothing to add to my previous description. In addition to these hæmolymph glands I found a number of others. In almost every case there was on each side a gland having precisely the same structure as a supra-renal capsule. They varied greatly in size, but in the larger ones the three zones were shown as perfectly as in the normal gland. In one case this gland measured half an inch across. There were also some small lymph glands of the regular type. In the connective tissue I found some very small nodules, which from their minuteness were difficult to dissect out. These on section were found to consist of large cells with a well-defined nucleus; in some there were only a few of these cells, in others there were thirty or forty in the section. In every case they were enclosed in a delicate capsule so fine that it could only be made out with difficulty. Some of these cells contained a number of brown pigment granules. What they are is not clear. They resemble nothing in nervous tissue with which I am familiar. They have evidently some function, as each collection has a definite blood-supply; further investigation may throw some light on this subject. In none of the cases examined did I find the supernumerary adrenals affected with disease. The hæmolymph glands showed acute inflammatory changes in some instances, but the only cases in which there was actual structural change was in general tuberculosis. The tubercular tissue was well developed and giant cells were numerous, but the tubercle bacillus was absent. It seems to me that this may explain some obscure tubercular conditions, and for that reason is worthy of further investigation.

CLINICAL ASPECTS OF IMMUNITY.

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In view of the enormous amount of speculation as to the theory of immunity and protection from disease, it has seemed to me to be of some interest to inquire from a practical standpoint, not so much what this immunity is, but what its strength is, its duration after attacks of some of the infectious and contagious diseases, and whether we can find any facts in this study to guide us in the practice of medicine. Even the most ignorant know that of a given number of persons exposed to a contagious disease all are not equally liable to take it. Those who escape when exposed are said to have an immunity against this disease. This immunity may be innate or congenital, or acquired. This innate, or natural immunity, however, is rare; acquired immunity being much more frequent. The latter comes either from a previous attack of the disease, from a protective vaccination or inoculation against this disease, from a prolonged stay in an infected region (acclimation), or from an intra-uterine infection (variola). The object of this paper originally was to try to see if any facts could be reached as to the duration and strength of immunity from a given disease after any one of the conditions above stated; to see if second attacks occurred, and how often; and to bring out any other facts which might be of interest. The results of this undertaking are not in proportion to the work involved, and are chiefly what possibly many already know; they have, however, the advantage of being brought together under one head, and may lead to further investigation in the same direction.

Exactly defined, immunity is that condition of the body whereby it resists the development of infectious or morbid processes, while predisposition is the condition of the body which, by the stimulation of a very slight cause, renders it liable to the attacks of certain diseases, especially to those of hereditary character. Whether immunity is complete or not is a subject which seems not to be decided. It is a common, but